# Massachusetts Highway Department 1995 Standard Specifications for Highways and Bridges

- 2. *Rolling* The surface shall be rolled with a self-propelled tandem roller with a mass not less than 2.8 metric tons nor more than 4.5 metric tons, or an approved roller as designated by the Engineer.
- 3. *Testing Surface* When tested with a 3 meter straightedge placed parallel to the center line of the courses, there shall be no deviation from a free surface in excess of 5 millimeters.

#### COMPENSATION

#### 701.80 Method of Measurement.

Concrete walks and wheelchair ramps will be measured in square meters.

Bituminous concrete walks, wheelchair ramps and driveways will be measured by the metric ton.

Gravel borrow will be measured by the cubic meter as specified in Subsection 150.80.

Fine Grading and Compacting (in subgrade areas) will be measured by the square meter.

# 701.81 Basis of Payment.

Concrete Sidewalks, Wheelchair Ramps and Sidewalks at Driveways will be paid for at the contract unit price per square meter.

Bituminous concrete for the walk surface and wheelchair ramps will be paid for at the contract unit price per metric ton.

Bituminous Concrete Driveways will be paid for at the contract unit price per metric ton under the item for Bituminous Concrete Driveways complete in place.

Gravel will be paid for at the contract unit price per cubic meter under Item 151., Gravel Borrow.

Fine Grading and Compacting will be paid for at the contract unit price per square meter under item 170., Fine Grading and Compacting (in subgrade areas).

Excavation will be paid for at the contract unit price per cubic meter under Item 120., Earth Excavation, or Item 121., Class A Rock Excavation.

### 701.82 Payment Items.

701.	Concrete Sidewalk	Square Meter
701.1	Concrete Sidewalk at Driveways	Square Meter
701.2	Concrete Wheelchair Ramp	Square Meter
702.	Bituminous Concrete Walk Surface	Metric Ton
702.2	Bituminous Concrete Wheelchair Ramp	Metric Ton
703.	Bituminous Concrete Driveway	Metric Ton
120.	Earth Excavation	Cubic Meter
121.	Class A Rock Excavation	Cubic Meter
151.	Gravel Borrow	Cubic Meter
170.	Fine Grading and Compacting (in subgrade areas)	Square Meter

# **SECTION 710**

# **BOUNDS**

# DESCRIPTION

#### **710.20** General.

Bounds shall be of granite as directed and shall be set at points designated by the Engineer and in conformity with these specifications. Drill Steel rods may be used, if directed, where the points fall on exposed rock.

Where and as directed, the stone or concrete bounds now in the ground shall be removed and reset in conformity with these specifications. In instances where these are not to be reset they shall be transported and stacked as directed.

Bounds (Lettered-Granite) and Bounds (Plain Granite) Furnished and Set, shall consist of furnishing and

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installing highway property bounds as required and in accordance with the plans and the applicable provisions of this Section. Lettering shall be in accordance with the Department Standards and face abutting properties.

#### **MATERIALS**

### **710.40** General.

Material shall meet the requirements specified in the following Subsections of Division III, Materials:

Granite Bounds M9.04.8
Drill Steel Rods M8.02.0

#### **CONSTRUCTION METHODS**

#### 710.60 General.

The bounds shall be set at the depth and position as directed, and they shall not project above the ground more than 150 millimeters after final grading.

Bounds located in lawns shall be set with the top of the bound 50 millimeters below the surface.

Bounds located in sidewalks or drives shall be set with the top of the bound flush with the surface.

Material for backfilling shall consist of suitable excavated material carefully placed about the bound and thoroughly tamped. When the excavation is in earth not suitable for backfilling, the Contractor shall furnish clean gravel or sand for backfill.

When the bound location falls on solid ledge and the use of a drill steel rod is directed by the Engineer, a 40 millimeter hole shall be drilled at a depth of 500 millimeters and a drill steel rod as specified under Subsection 710.40 shall be placed in the hole. The rod shall be set so that the hole is on the bound point. The drill steel rod shall project above the ledge from 25 millimeters to 50 millimeters, and shall be grouted with a 1:1 mortar mix.

The 13 millimeter drill holes in the top of the bounds shall be filled to their full depth with lead rope securely compacted in place.

#### 710.61 Bounds Removed and Reset.

Present bounds shall be excavated from the ground, the holes properly backfilled with suitable excavated material, or borrow, and the bounds delivered to the new locations and reset as directed and suitably backfilled, all in accordance with the requirements for setting bounds as stipulated hereinbefore.

When a bound to be reset does not have a drill hole in the top center of the bound, a hole 40 millimeters in depth and 13 millimeters in diameter with the bottom somewhat flared, shall be drilled and this hole filled with lead rope securely compacted in place.

The Contractor will be held responsible for all bounds removed, and shall replace at his/her own expense all bounds as may have been broken by his employees, or otherwise, after such removal.

#### 710.62 Bounds Removed and Stacked.

Present bounds shall be excavated from the ground, the holes properly backfilled with suitable excavated material and the bounds carefully stacked, as directed.

The Contractor shall accept and hold entire responsibility for the removal, handling, stacking at a location convenient for removal by owner, and protection of all bounds until the final removal by others as designated and in accordance with the following: Any bound damaged through lack of protection or carelessness by the Contractor shall be replaced with a satisfactory bound at his/her expense. The Contractor's responsibility will cease upon final acceptance of the work or 60 days from the time a certified notice, with copy to Engineer, is sent by Contractor to owner of material that material is available for removal.

### **COMPENSATION**

### 710.81 Basis of Payment.

This work will be paid for at the contract unit price each under the item for Bounds Removed and Reset, or

Bounds Removed and Stacked, or Bounds (Lettered-Granite) or Bounds (Plain-Granite) or Drill Steel Rods (Set in Solid Ledge) complete in place, and paid for as a bound of the type indicated.

Allowance for rock, if not already paid for under previous rock excavation, shall be based on an area 0.36 square meters multiplied by the depth of the rock to the bottom of the bound plus 150 millimeters, and will be paid for under the item of Class B Rock Excavation. There will be no rock allowance paid for drill steel rods.

Bounds which are designated to be Removed and Reset and are found to be unsuitable for re-use after excavation through no fault of the Contractor shall be paid for at one half the contract unit price.

Bounds which are designated to be Removed and Stacked and are found to be unsuitable for re-use through no fault of the Contractor will be paid for at the full contract unit price.

Borrow materials, when directed to be used, will be paid for at the contract unit price per cubic meter for the particular type of Borrow.

# 710.82 Payment Items.

710.3	Bound-Lettered Granite	Each
710.4	Bound-Plain Granite	Each
711.	Bound Removed and Reset	Each
712.	Bound Removed and Stacked	Each
144.	Class B Rock Excavation	Cubic Meter
151.	Gravel Borrow	Cubic Meter
154.	Sand Borrow	Cubic Meter

# **SECTION 715**

# RURAL MAIL BOXES REMOVED AND RESET

### DESCRIPTION

#### **715.20** General.

This work consists of removing and resetting present mail boxes in accordance with these specifications and in close conformity with the lines and grades established by the Engineer.

### **MATERIALS**

#### **715.40** General.

Material shall meet the requirements specified on the plans.

#### CONSTRUCTION METHODS

# 715.60 General.

The mail boxes indicated shall be removed together with the posts, and the post holes filled with suitable material and properly tamped.

If necessary during the construction the mail boxes shall be set in temporary locations as directed, so that they are easily accessible to the mail carrier.

In their final permanent location the present mail boxes shall be set on new wooden bases and iron pipe posts as shown on the Department's plan for Setting Rural Mail Boxes.

# **COMPENSATION**

#### 715.80 Method of Measurement.

The number of units to be paid for will be determined by the number of sustaining posts installed and not by the